AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) An antenna apparatus comprising:

a ground member having a length along a predetermined directional axis, the length being about a quarter or more of a wavelength of an electromagnetic wave used for communication; and

an antenna element extending in a direction substantially orthogonal to the directional axis and connected to the ground member;

wherein the antenna element is disposed substantially in the same plane as an end portion of the ground member with a predetermined distance provided therebetween.

2. (Cancelled)

3. (Original) The antenna apparatus according to Claim 1, wherein:

the antenna element comprises an antenna element main body and a feeder terminal; and

the antenna element main body and the feeder terminal cooperatively form a 1/4-wavelength inverted F antenna.

4. (Original) The antenna apparatus according to Claim 1, wherein:

the ground member further comprises a shielding member for shielding an electronic circuit.

5. (Original) The antenna apparatus according to Claim 1, wherein:

the ground member and the antenna element further comprise one piece.

6. (Original) A printed wiring board comprising:

a ground member having a length along a predetermined directional axis, the length being about a quarter or more of a wavelength of an electromagnetic wave used for communication; and

an antenna element extending in a direction substantially orthogonal to the directional axis and connected to the ground member;

wherein the ground member and the antenna element are printed wirings.

7. (Original) The printed wiring board according to Claim 6, wherein:

the antenna element is disposed substantially in the same plane as an end portion of the ground member with a predetermined distance provided therebetween.

8. (Original) The printed wiring board according to Claim 6, wherein:

the antenna element comprises an antenna element main body and a feeder terminal, and

the antenna element main body and the feeder terminal cooperatively form a 1/4-wavelength inverted F antenna.

9. (Original) The printed wiring board according to Claim 6, wherein:

the ground member and the antenna element further comprise one piece.

10. (Currently Amended) A printed circuit board comprising:

a printed wiring board;

an electronic circuit disposed on the printed wiring board;

a ground member having a length along a predetermined directional axis, the length being about a quarter or more of a wavelength of an electromagnetic wave used for communication; and

an antenna element extending in a direction substantially orthogonal to the directional axis and connected to the ground member;

wherein the antenna element is disposed substantially in the same plane as an end portion of the ground member with a predetermined distance provided therebetween.

11. (Cancelled)

12. (Original) The printed circuit board according to Claim 10, wherein:

the antenna element comprises an antenna element main body and a feeder terminal, and

the antenna element main body and the feeder terminal cooperatively form a 1/4-wavelength inverted F antenna.

13. (Original) The printed circuit board according to Claim 10, wherein:

the antenna element and the ground member further comprise one piece.

14. (Original) The printed circuit board according to Claim 10, wherein:

the antenna element further comprises a printed wiring on the printed wiring board; and

the ground member is a separate component from the printed wiring board.

15. (Original) The printed circuit board according to Claim 13, wherein:

the ground member further comprises a shielding member for shielding the electronic circuit.

16. (Original) The printed circuit board according to Claim 15, further comprising:

a ground pattern formed on the printed wiring board and electrically connected to the ground member.

17. (Original) The printed circuit board according to Claim 10, wherein:

the antenna element and the ground member further comprise printed wirings on the printed wiring board.

18. (Original) A communication adapter comprising:

a printed wiring board;

an electronic circuit disposed on the printed wiring board;

a ground member having a length along a predetermined directional axis, the length being about a quarter or more of the wavelength of an electromagnetic wave used for communication;

an antenna element extending in a direction substantially orthogonal to the directional axis and connected to the ground member; and

a connector connection terminal;

wherein the connector connection terminal is disposed on a side toward which an antenna element main body of the antenna element extends in relation to the printed wiring board.

19. (Original) The communication adapter according to Claim 18, wherein:

the antenna element further comprises a feeder terminal, and

the antenna element main body and the feeder terminal cooperatively form an inverted F antenna.

20. (Original) Portable electronic equipment comprising the antenna apparatus according to Claim 1.

21. (Original) The portable electronic equipment according to Claim 20, wherein

the portable electronic equipment further comprises a wrist watch.

22. (Original) The printed circuit board according to Claim 14, wherein:

the ground member further comprises a shielding member for shielding the electronic circuit.

23. (Original) The printed circuit board according to Claim 22, further comprising:

a ground pattern formed on the printed wiring board and electrically connected to the ground member.